THE JOURNAL OF

PARASITOLOGY

Founded by Henry Baldwin Ward

JOURNAL OF THE
AMERICAN SOCIETY OF PARASITOLOGISTS

EDITORS

DAVID F. METTRICK and SHERWIN S. DESSER

CONSULTANTS

William C. Campbell Carmen F. Fioravanti Walter M. Kemp Austin J. MacInnis John S. Mackiewicz Leo Margolis Mary Hanson Pritchard

EDITORIAL BOARD

Mary Beverley-Burton Gilbert A. Castro Bruce M. Christensen Raymond T. Damian Terry A. Dick Frank J. Etges Jacob K. Frenkel Raymond E. Kuhn Jiri Lom Diane J. McLaren Kenneth D. Murrell Brent B. Nickol James H. Oliver, Jr. Robin M. Overstreet Larry S. Roberts Gerhard A. Schad Leonard W. Scheibel Clarence A. Speer Jane A. Starling Vassilios J. Theodorides Jeffrey F. Williams Kenneth A. Wright



VOLUME 72 1986

CONTENTS OF VOLUME 72

FEBRUARY 1986, NUMBER 1

GWENDOLEN REES: SPECIAL ISSUE	
Gwendolen Rees D.Sc., F.R.S.: A Biographic Sketch. HARFORD WILLIAMS	3
Memories of Professor F. Gwendolen Rees F.R.S. VAUGHAN SOUTHGATE	9
One or Three Gyrocotylideans (Platyhelminthes) in <i>Chimaera monstrosa</i> (Holocephali)? JUDITH A. COLIN, H. HARFORD WILLIAMS, and ODD HALVORSEN	10
The Taxonomic Status of Actinocleidus Mueller, 1937; Anchoradiscus Mizelle, 1941; Clavunculus Mizelle et al., 1956; Anchoradiscoides Rogers, 1967; Syncleithrium Price, 1967 and Crinicleidus n. gen.: North American Ancyrocephalids (Monogenea) with Articulating Haptoral Bars MARY BEVERLEY-BURTON	22
INVITED REVIEW	
The Chemotherapy of Parasitic Infections. WILLIAM C. CAMPBELL	45
MORPHOLOGY AND TAXONOMY	
A Review of the Genus <i>Pedibothrium</i> Linton, 1909 (Tetraphyllidea: Onchobothriidae) with Description of Two New Species and Comments on the Related Genera <i>Pachybothrium</i> Baer and Euzet, 1962 and <i>Balanobothrium</i> Hornell, 1912. J. N. CAIRA and MARY HANSON PRITCHARD	62
The Topography of the Exoskeleton of <i>Cediopsylla simplex</i> (Baker, 1895) (Siphonaptera: Pulicidae): The Thorax, Abdomen, and Associated Appendages. JAMES W. AMRINE and ROBERT E. LEWIS	71
Acanthocephala from Lake Fishes in Wisconsin: Numerical and Structural–Functional Relationships of the Giant Nuclei in Neoechino- rhynchus cylindratus (Neoechinorhynchidae). OMAR M. AMIN and JENIFER C. VIGNIERI	88
Genetic Similarity and Variability between Natural Populations and Laboratory Colonies of North American <i>Boophilus</i> (Acari: Ixodidae). PAUL W. SATTLER, LARRY R. HILBURN, RONALD B. DAVEY, JOHN E. GEORGE, and JOSÉ BERNARDO ROJAS AVALOS	95
Two New Species of <i>Ascometra</i> Kholodkovskii, 1912 (Cestoda: Paruterinidae) from the Kori Bustard, <i>Choriotis kori</i> (Burchell), in Kenya. A. M. ADAMS and R. L. RAUSCH	101
Selenidium vivax n. sp. (Protozoa, Apicomplexa) from the Sipunculid Phascolosoma agassizii Keferstein, 1867. JOHN GUN- DERSON and EUGENE B. SMALL	107
ECOLOGY	
Acanthocephala from Lake Fishes in Wisconsin: Host and Seasonal Distribution of Species of the Genus Neoechinorhynchus Hamann, 1892. OMAR M. AMIN	111
Field Observations on the Population Dynamics of <i>Bulinus globosus</i> , the Intermediate Host of <i>Schistosoma haematobium</i> in the Ifakara Area, Tanzania. HANSPETER MARTI	119
LIFE CYCLES AND DEVELOPMENT	
Host-Parasite Relationships between <i>Gyrodactylus stellatis</i> (Monogenea: Gyrodactylidae) and <i>Parophrys vetulus</i> (Pleuronectidae—English Sole) from Coastal Waters of Oregon. H. N. KAMISO and ROBERT E. OLSON	125
Influence of the Mexican Strain of Steinernema feltiae and Its Associated Bacterium Xenorhabdus nematophilus on Galleria mellonella. GARY B. DUNPHY and JOHN M. WEBSTER	130
Aspects of Larval Development and Histochemistry of Ophthalmophagus singularis (Trematoda: Cyclocoelidae). STEPHEN J. TAFT	136
Infectivity, Growth, and Development of Echinostoma revolutum (Digenea: Echinostomatidae) in the Golden Hamster, Mesocricetus auratus. JOSÉ FRANCO, JANE E. HUFFMAN, and BERNARD FRIED	142
IMMUNOLOGY	
In Vitro Induction of Suppressor Cells by Plasma of Rats with Trypanosoma brucei rhodesiense Infection. MICHAEL M. HAYES and HERBERT W. COX	148
Dot-ELISA Assessment of Guinea Pig Antibody Responses to Repeated <i>Dermacentor andersoni</i> Infestations. A. CHRISTIAN WHELEN, L. KIM RICHARDSON, and STEPHEN K. WIKEL	155
PHYSIOLOGY—BIOCHEMISTRY	
Monosaccharide Transport by Eimeria tenella Sporozoites. CHARLES K. SMITH II and DAVID E. LEE	163
Carbohydrate Utilization by <i>Trichomonas gallinae</i> : Effects on Growth and Metabolic Activity under Nongrowth Conditions. HERBERT M. MATTHEWS	170
RESEARCH NOTES	
The Effects of Praziquantel on Various Larval and Adult Parasites from Freshwater and Marine Snails and Fish. MIKE MOSER, JUDY SAKANARI, and RICHARD HECKMANN	175

Apical and Lateral Sense Organs in <i>Moniliformis moniliformis</i> (Acanthocephala): An SEM View. T. T. DUNAGAN and DONALD M. MILLER
2/ Terminal Nucleotide Sequence of the 17S Ribosomal RNA Species from Plasmodium falcinarum DOROTHY F SHIPPEN
and ANNE C. VEZZA
Nosema glossiphoniae Schröder Rediscovered. STUART M. SPELLING and JOHNSTONE O. YOUNG
Egg Production of <i>Pseudosuccinea columella</i> and <i>Fossaria cubensis</i> (Lymnaeidae) in Laboratory Culture. W. M. BOYCE, C. H. COURTNEY, and M. B. THIBIDEAU
Differences in Caudal Morphology in Male Abbreviata levicauda (Nematoda: Physalopteridae) in Two Sympatric Species of Varanus (Reptilia: Varanidae). HUGH I. JONES
Altered Behavior in Isopods (Armadillidium vulgare) Infected with the Nematode Dispharynx nasuta. JANICE MOORE and JIM LASSWELL 186
Some Physiological Effects of Sanguinicola fontinalis (Trematoda: Sanguinicolidae) Infection in the Brook Trout, Salvelinus fontinalis. CHARLES W. HOLLIDAY and BERNARD FRIED
Development of Erythrocytic Merozoites to Gametocytes in Chickens Recovered from Sporozoite Infection with Leucocytozoon caulleryi. TAKASHI ISOBE and KAZUO AKIBA
Schistosoma mansoni: Long-term Survival in the Rat Is Not a Genetically Determined Worm Trait. DONATO CIOLI
Juvenile Precocity in a Pentastome, <i>Kiricephalus pattoni</i> (Stephens, 1908), Sambon, 1922 in the Reptilian Intermediate Host, <i>Tro-pidonotus piscator.</i> M. V. JOHN and A. M. NADAKAL
First Rediae and Cercariae to be Described from Heteropods. R. J. G. LESTER and L. J. NEWMAN
BOOK REVIEWS
Advances in Parasitology, Volume 23, J. R. Baker and R. Muller (eds.). K. A. WRIGHT
Frogs as Host-Parasite Systems I. An Introduction to Parasitology Through the Parasites of <i>Rana temporaria</i> , <i>R. esculenta</i> and <i>R. pipiens</i> , by J. D. Smyth and M. M. Smyth. D. W. HALTON
APRIL 1986, NUMBER 2
INVITED REVIEW
Autoimmunity in Chagas' Disease. FELIPE KIERSZENBAUM
IMMUNOLOGY
Defense Reactions of Mosquitoes to Filarial Worms: Effect of Host Age on the Immune Response to <i>Dirofilaria immitis</i> Microfilariae. BRUCE M. CHRISTENSEN, MICHELE M. LaFOND, and LINDA A. CHRISTENSEN 212
Parasite-Induced Suppression of the Immune Response in <i>Aedes aegypti</i> by <i>Brugia pahangi</i> . BRUCE M. CHRISTIENSEN and MICHELE M. LaFOND
Hemocyte-Mediated Melanization of Microfilariae in Aedes aegypti. BRUCE M. CHRISTENSEN and KEITH F. FORTON 220
TAXONOMY/SYSTEMATICS
Sarcocystis clethrionomyelaphis N. Sp. from Snakes of the Genus Elaphe and Different Voles of the Family Arvicoli-
dae. FRANZ-RAINER MATUSCHKA
(Reptilia: Chelonia) from Papua New Guinea. DAVID BLAIR and MARK M. ROSE
Systematics of Species Referred to the Genus Angiostrongylus. JOHN E. UBELAKER
Systematics of Species Referred to the Genus Angiostrongylus. JOHN E. UBELAKER
Systematics of Species Referred to the Genus Angiostrongylus. JOHN E. UBELAKER. 237 Acanthocheilonema sabanicolae N. Sp. (Filarioidea: Onchocercidae) from the Savanna Armadillo (Dasypus sabanicola) in Venezuela, with Comments on the Genus Acanthocheilonema. MARK L. EBERHARD and I. CAMPO-AASEN. 245 Mites of the Genus Pteropimyobia Fain (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO UCHIKAWA. 249 Mites of the Genus Binuncus Radford (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO
Systematics of Species Referred to the Genus Angiostrongylus. JOHN E. UBELAKER. 237 Acanthocheilonema sabanicolae N. Sp. (Filarioidea: Onchocercidae) from the Savanna Armadillo (Dasypus sabanicola) in Venezuela, with Comments on the Genus Acanthocheilonema. MARK L. EBERHARD and I. CAMPO-AASEN 245 Mites of the Genus Pteropimyobia Fain (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO UCHIKAWA 249 Mites of the Genus Binuncus Radford (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO UCHIKAWA 257 Studies on African Saurian Malarias: Plasmodium holaspi N. Sp. from the Flying Lacertid Holaspis guentheri. SAM R. TEL-
Systematics of Species Referred to the Genus Angiostrongylus. JOHN E. UBELAKER 237 Acanthocheilonema sabanicolae N. Sp. (Filarioidea: Onchocercidae) from the Savanna Armadillo (Dasypus sabanicola) in Venezuela, with Comments on the Genus Acanthocheilonema. MARK L. EBERHARD and I. CAMPO-AASEN 245 Mites of the Genus Pteropimyobia Fain (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO UCHIKAWA 249 Mites of the Genus Binuncus Radford (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO UCHIKAWA 257 Studies on African Saurian Malarias: Plasmodium holaspi N. Sp. from the Flying Lacertid Holaspis guentheri. SAM R. TEL-
Systematics of Species Referred to the Genus Angiostrongylus. JOHN E. UBELAKER. 237 Acanthocheilonema sabanicolae N. Sp. (Filarioidea: Onchocercidae) from the Savanna Armadillo (Dasypus sabanicola) in Venezuela, with Comments on the Genus Acanthocheilonema. MARK L. EBERHARD and I. CAMPO-AASEN. 245 Mites of the Genus Pteropimyobia Fain (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO UCHIKAWA. 249 Mites of the Genus Binuncus Radford (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO UCHIKAWA. 257 Studies on African Saurian Malarias: Plasmodium holaspi N. Sp. from the Flying Lacertid Holaspis guentheri. SAM R. TELFORD, JR. 271 EXPERIMENTAL Muscle Fiber Selectivity of Trichinella spiralis and Trichinella pseudospiralis (1983). ALI BAGHERI, JOHN E. UBELAKER.
Systematics of Species Referred to the Genus Angiostrongylus. JOHN E. UBELAKER. 237 Acanthocheilonema sabanicolae N. Sp. (Filarioidea: Onchocercidae) from the Savanna Armadillo (Dasypus sabanicola) in Venezuela, with Comments on the Genus Acanthocheilonema. MARK L. EBERHARD and I. CAMPO-AASEN. 245 Mites of the Genus Pteropimyobia Fain (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO UCHIKAWA. 249 Mites of the Genus Binuncus Radford (Trombidiformes, Myobiidae) and Information on Host Taxonomy Deduced from Them. KIMITO UCHIKAWA. 257 Studies on African Saurian Malarias: Plasmodium holaspi N. Sp. from the Flying Lacertid Holaspis guentheri. SAM R. TELFORD, JR. 271 EXPERIMENTAL Muscle Fiber Setzivity of Trichinella spiralis and Trichinella pseudospiralis (1983). ALI BAGHERI, JOHN E. UBELAKER,

MASARACCHIA, TOMMY C. HASSELL, and MANUS J. DONAHUE	299
Survival of <i>Macracanthorhynchus ingens</i> in Swine and Histopathology of Infection in Swine and Raccoons. MARTHA J. NEL-SON and BRENT B. NICKOL	306
Purification and Characterization of a Neutrophil Chemotactic Factor from <i>Dirofilaria immitis</i> . YOICHIRO HORII, KOICHIRO FUJITA, and MAKOTO OWHASHI	315
Eosinophilia in Murine Trichinellosis. S. H. PINCUS, P. V. CAMMARATA, M. DELIMA, and D. DESPOMMIER	321
Sex Steroid Content and Metabolism in <i>Trichostrongylus colubriformis</i> (Nematoda). WEN-LI CHUNG, EDWARD J. PARISH, and LEON W. BONE	326
BEHAVIOR	
The Mode of Transmission of the Excitant Sex Pheromone in Two Australian Reptile Ticks. ROSS H. ANDREWS, C. MICHAEL BULL, and JOE ORBACH	330
GENETICS	
Host Genetics: A Key Factor in Regulating the Distribution of Parasites in Natural Host Populations. DONALD L. WASSOM, TERRY A. DICK, NEIL ARNASON, DANIEL STRICKLAND, and ALBERT W. GRUNDMANN	334
LIFE CYCLE/DEVELOPMENT	
Cultivation of <i>Haemonchus contortus</i> (Nematoda: Trichostrongylidae) from Infective Larvae to the Adult Male and the Egg-Laying Female. FRANK STRINGFELLOW	339
RESEARCH NOTES	
Effect of pH and Temperature on Lipase and Phospholipase of Adult <i>Haemonchus contortus</i> (Nematoda: Trichostrongylidae). JYOTIKA KAPUR and M. L. SOOD	346
An In Vitro Study of Sporulation in Cryptosporidium Species. DOUGLAS B. WOODMANSEE	348
Characterization of Surface Glycoproteins on Schistosoma mansoni Adult Worms by Metabolic Labeling Using Hexose Precursors. EUGENE G. HAYUNGA and MARY P. SUMNER	350
Toxoplasma gondii Antibodies in Cats: Detection by Indirect Hemagglutination and Indirect Fluorescent Antibody Tests. BARBARA J. DEEB, MAHA M. SUFAN, and RONALD F. DiGIACOMO	355
A Method for the Study of Sporocyst Demography during Schistosome Development. FRANCISCO VEAS	357
IN MEMORIAM	
Harry Hoogstraal, 1917–1986. DONALD HEYNEMAN	359
LETTERS TO THE EDITOR	
Critical Comment. RON B. PODESTA	361
Response. RICHARD D. LUMSDEN and WILLIAM A. MURPHY	362
ANNOUNCEMENTS	
Institute of Tropical Medicine Annual Colloquium	282
ASP Annual Meetings and Local Committee Chairpersons	363
Fourth International Symposium on Invertebrate Reproduction	363
Tissue Culture Association Membership	363
BOOK REVIEWS	
Hybridoma Technology in Agricultural and Veterinary Research, edited by Norman J. Stern and H. Ray Gamble. JEFFREY F.	000
WILLIAMS	236
Critical Reviews in Tropical Medicine, edited by R. K. Chandra. PAUL C. BEAVER	338
CORRECTIONS	275
EDITORIAL ACKNOWLEDGMENTS	276
JUNE 1986, NUMBER 3	
0011 1000, 11011 E.T.	
HODAGE W. CTIMICADD, CRECIAL ICCUE	
HORACE W. STUNKARD: SPECIAL ISSUE	367
Horace Wesley Stunkard: A Dedication. WILLIAM H. COIL The Cercaria of Allocreadium ictaluri Pearse (Digenea: Allocreadiidae). RAYMOND M. CABLE and LEWIS E. PETERS	369
INVITED REVIEW The Taxonomy of Sarcocystis (Protozoa, Apicomplexa) Species. NORMAN D. LEVINE	372

Structural Analysis of the Calcium-Binding Protein Calmodulin from Ascaris suum Obliquely Striated Muscle. RUTHANN A.

EXPERIMENTAL	
Variation in the Sizes of Eggs and Oncospheres and the Numbers and Distributions of Testes in the Tapeworm, <i>Hymenolepis diminuta.</i> PETER W. PAPPAS and DAVID A. LEIBY	38
Cryptobia salmositica: Susceptibility of Infected Rainbow Trout, Salmo gairdneri, to Environmental Hypoxia. PATRICK T. K. WOO and S. D. WEHNERT	39
Schistosoma mansoni: Production of Cercarial Eicosanoids as Correlates of Penetration and Transformation. ALAN C. FUSCO, B. SALAFSKY, and KATHY DELBROOK	397
In Vitro Study of Physiological Suppression of Supernumerary Parasites by the Endoparasitic Wasp Leptopilina heterotoma. M. J. SILVERS and A. J. NAPPI	40
Interaction between the Biomphalaria glabrata–Schistosoma mansoni Host-Parasite System and the Non-Target Molluscs: Influence on Cercarial Production. HÉLÈNE MONÉ, ANDRÉ THÉRON, and CLAUDE COMBES	410
Genetic Variability and Differentiation of Natural Populations in Three Japanese Lung Flukes, <i>Paragonimus ohirai, Paragonimus iloktsuenensis</i> and <i>Paragonimus sadoensis</i> (Digenea: Troglotrematidae). TAKESHI AGATSUMA and SHIGEHISA HABE	417
IMMUNOLOGY	
Elucidation of Cellular Population and Nature of Anti-Amoebic Antibodies in Cytotoxicity to Entamoeba histolytica (NIH:200). SAXENA, SHASHI CHUGH, and V. K. VINAYAK	434
An Optimized Enzyme-Linked Immunosorbent Assay for Quantitative Diagnosis of Bovine Fascioliasis. JOHN H. WYCKOFF III and RICHARD E. BRADLEY	439
Stage and Species Specificity of Antigens Encoded by Two Geographic Strains of <i>Schistosoma mansoni</i> mRNA. RONALD BLANTON, SARAH HOROWITZ, MITERMAYER GALVAO DOS REIS, FRITZ ROTTMAN, ZILTON ANDRADE, and ADEL A. F. MAHMOUD	445
Tick Antigens Recognized by Serum from a Guinea Pig Resistant to Infestation with the Tick Rhipicephalus appendiculatus. STUART Z. SHAPIRO, WOLF P. VOIGT, and KOZO FUJISAKI	454
BEHAVIOR	
The Role of Muscle Larvae of <i>Trichinella spiralis</i> in the Behavioral Alterations of the Mouse Host. ALEXANDRA S. ZOHAR and MANFRED E. RAU	464
RESEARCH NOTES	
Trypanosoma cruzi Morphogenesis: Preliminary Purification of an Active Fraction from Hemolymph and Intestinal Homogenate of Triatoma infestans. E. L. D. ISOLA, E. M. LAMMEL, O. GIOVANNIELLO, A. M. KATZIN, and S. M. GONZÁLEZ CAPPA	
Parasitogenic Octavus Neuropathy as a Cause of Mass Stranding of Odontoceti. TAMOTSU MORIMITSU, TOMOYUKI NAGAI,	46
MINORU IDE, AKIRA ISHII, and MASASHI KOONO Susceptibility of Cebus nigrivittatus to Leishmania infantum. IOANNIS VOULDOUKIS, WILLIAM OGUNKOLADE, LOUIS STRAZIELLE, ISABELLE PLOTON, and LOIC MONJOUR	46
A Simplified Method for <i>In Vitro</i> Excystation of <i>Giardia muris</i> . DENNIS E. FEELY	47:
Besnoitia Strain Differentiation Using Isoenzyme Electrophoresis. SYLVIA M. LE BLANCQ, SHERWIN S. DESSER, VARDA SHKAP, and EUGENE PIPANO	475
Eosinophil Levels in Alaria marcianae (Trematoda) Infected Mice. CATHERINE L. CURTSINGER and WESLEY L. SHOOP	47
Monogenea from Some Marine Fishes Taken off the Pacific Coast of Canada. D. MURITH M. BEVERLEY-BURTON, T. E. McDONALD, and	479
Effects on <i>Trypanosoma brucei</i> Differentiating Bloodstream Trypomastigotes and Established Procyclic Trypomastigotes When Grown in the Presence of Respiratory Inhibitors. RANCE B. LE FEBVRE and GEORGE C. HILL	48
BOOKS RECEIVED (1985)	484
ANNOUNCEMENT	10
Upjohn–UCLA Symposium	40
AUGUST 1986, NUMBER 4	
INVITED REVIEW	
Highlights in Recent Research on Tick-borne Diseases of Domestic Animals. GERRIT UILENBERG	48
The Behavior of Juvenile Fasciola hepatica. MICHAEL V. K. SUKHDEO and D. F. METTRICK	492

BIOCHEMISTRY	
Some Biochemical Effects of the Growth Hormone Analogue Produced by Plerocercoids of the Tapeworm <i>Spirometra mansonoides</i> on Carbohydrate Metabolism of Adipose Tissue from Normal, Diabetic, and Hypophysectomized Rats. MOHAMMED A. M. SALEM and C. KIRK PHARES	498
Leucine Aminopeptidase and Hatching of Schistosoma mansoni Eggs. YI-ZHENG XU and MARC H. DRESDEN	507
DRUG ACTION	
Studies on Anthelmintic Effects of Flubendazole and Mebendazole on the Rat Lungworm <i>Angiostrongylus cantonensis</i> in Mice and Rats. JUN MAKI and TOSHIO YANAGISAWA	512
ECOLOGY	
A Coprological Survey of Parasites of Wild Neotropical Felidae. SHARON PATTON, ALAN RABINOWITZ, STEVE RANDOLPH, and SANDRA STRAWBRIDGE JOHNSON	517
EXPERIMENTAL	
Studies of Comparative Infectivity of Fifteen Strains of <i>Plasmodium vivax</i> to Laboratory-reared Anopheline Mosquitoes, with Special Reference to <i>Anopheles culicifacies</i> . WILLIAM E. COLLINS, McWILSON WARREN, ALAN Y. HUONG, JIMMIE C. SKINNER, BETTYE B. SUTTON, and PEGGY S. STANFILL	521
Infection of Aotus azarae boliviensis Monkeys with Different Strains of Plasmodium falciparum. WILLIAM E. COLLINS, JIM- MIE C. SKINNER, J. ROGER BRODERSON, ALAN Y. HUONG, PHILIP C. MEHAFFEY, PEGGY S. STANFILL, and BETTYE B. SUTTON	525
Lack of Correlation between Schistosomicidal and Anticholinergic Properties of Hycanthone and Related Drugs. LIVIA PICA-MATTOCCIA and DONATO CIOLI	531
Does Concanavalin A Treatment of Host Cells Enhance or Inhibit Their Association with <i>Trypanosoma cruzi</i> Trypomastigotes? BRAD STILES and FELIPE KIERSZENBAUM	540
The Bacterial Flora of the Intestine of Ascaris suum and 5-Hydroxytryptamine Production. SHING-CHIEN HSU, KARL R. JOHANSSON, and MANUS J. DONAHUE	545
Artificial Feeding of Northern Fowl Mites, <i>Ornithonyssus sylviarum</i> (Canestrini and Fanzago) (Acari: Macronyssidae), through Membranes. MAXWELL M. CRYSTAL	550
The Culture of <i>Diplostomum spathaceum</i> Metacercariae on the Chick Chorioallantois. GREGORY H. LENO and HARRY L. HOLLOWAY, JR.	555
Nematospiroides dubius: Multiple Infections in Mice Bred for Immune Responsiveness. PETRUS SITEPU, COLIN DOBSON, and PAUL J. BRINDLEY	559
Host Specificity of <i>Cryptosporidium</i> sp. Isolated from Chickens. DAVID S. LINDSAY, BYRON L. BLAGBURN, and CHRISTINE A. SUNDERMANN	565
IMMUNOLOGY	
Porphyrin Content of the Cysticercus of <i>Taenia solium</i> . CARLOS LARRALDE, GUSTAVO MARTINEZ ZEDILLO, DAVID LAGUNOFF, RUSSELL LUDOWYKE, ROSA M. MONTOYA, FEDERICO GOODSAID, GEORGES DREYFUS, EDDA SCIUTTO, TZIPE GOVEZENSKY, and MARIA L. DIAZ	569
Immunoglobulins inside Schistosoma japonicum Eggs from the Livers of Mice. MIZUKI HIRATA, TOMOYUKI HIEDA, and HIROSHI TSUTSUMI	578
Serum Factors from Infected Baboons Inhibit Oviposition and Cause Unpairing of Schistosoma mansoni In Vitro. BOSSHARDT and RAYMOND T. DAMIAN	583
LIFE CYCLE AND DEVELOPMENT	
Description of the Goose Coccidium <i>Eimeria stigmosa</i> (Klimeš, 1963), with Evidence of Intranuclear Development. ALVIN A. GAJADHAR, DONALD J. RAINNIE, and RICHARD J. CAWTHORN	588
MORPHOLOGY	
Application of the Serial Sectioning and Tridimensional Reconstruction Techniques to the Morphological Study of the <i>Plasmodium falciparum</i> Mitochondrion. C. SLOMIANNY and G. PRENSIER	595
TAXONOMY/SYSTEMATICS	
Ophiotaenia ecuadorensis n. sp. (Cestoda: Proteocephalidae) from Hyla geographica Spix, 1824 in Ecuador. WILLIAM G. DYER	599
RESEARCH NOTES	
Polymorphism of Eimerian Oocysts: A Dilemma Posed by Working with Some Naturally Infected Hosts. BRENT B. PARKER and DONALD W. DUSZYNSKI	602
Cloning of Eimeria tenella in the Chicken. H. DAVID CHAPMAN and M. ELAINE ROSE	605
Schistosoma mansoni: Comparative Development of Schistosomules Produced by Artificial Techniques. CAROLYN E. COUSIN, M. A. STIREWALT, CHARLES H. DORSEY, and LORRITA P. WATSON	606

Schistosoma mansoni: Transformation of Cercariae to Schistosomules in ELAC, Saline and Phosphate-buffered	
Saline. CAROLYN E. COUSIN, M. A. STIREWALT, and CHARLES H. DORSEY	609
Depressed Feeding by the Nematode <i>Trichostrongylus colubriformis</i> in Inoculated Goats. KURT P. BOTTJER, P. H. KLESIUS,	611
and LEON W. BONE	011
formes: Limnesiidae). CARMINE A. LANCIANI	613
Cryptosporidium sp. Infections in Chickens, Produced by Intra-cloacal Inoculation of Oocysts. DAVID S. LINDSAY and BYRON L. BLAGBURN	615
BOOK REVIEWS	
Advances in Cell Culture, Volume 4, edited by K. Maramorosch. J. R. BAKER	549
Laboratory Guide to Insect Pathogens and Parasites, by George O. Poinar, Jr. and Gerard M. Thomas. A. RALPH BARR	554
Biology of the Eucestoda, Volume 1, edited by C. Arme and P. W. Pappas. WILLIAM H. COIL	616
ANNOUNCEMENTS	
VIIth International Conference on Trichinellosis (ICT VII)	619
Ninth Summer Program in Methods of Immunologic Research and Diagnosis	619
13th Western Regional Electron Microscopy and Microbeam Analysis Meeting: Call for Papers	619
Publication Announcement, Primate Information Center, University of Washington	619
LIST OF ADVERTISERS	
LMD Laboratories	620
OCTOBER 1986, NUMBER 5	
INVITED REVIEW	
A Review of Protonephridial Excretory Systems in Acanthocephala. T. T. DUNAGAN and DONALD M. MILLER	621
ECOLOGY	
Life History and Population Biology of Larval Acanthocephalus lucii (Acanthocephala: Echinorhynchidae) in the Isopod Asellus aquaticus. JOHN BRATTEY	633
Seasonal Dynamics of Halipegus occidualis (Trematoda: Hemiuridae) in Helisoma anceps and Its Impact on Fecundity of the Snail Host. AMY E. CREWS and GERALD W. ESCH	646
Long-term Population Dynamic of Pinworms (Syphacia obvelata and Aspiculuris tetraptera) in Mice. MARILYN E. SCOTT and	
HAROLD C. GIBBS	652
gairdneri Richardson. ROLAND CUSACK	663
EXPERIMENTAL	
Utilization of the Heme Moiety of Hemoglobin by Schistosoma mansoni Schistosomules In Vitro. J. BOGITSH LEWIS A. FOSTER and BURTON	669
In Vitro Cultivation of Meronts of Sarcocystis cruzi. C. A. SPEER, W. M. WHITMIRE, D. W. REDUKER, and J. P. DUBEY	677
Growth and Feeding of <i>Echinostoma revolutum</i> on the Chick Chorioallantois and in the Domestic Chick. NANCY WISNEWSKI, BERNARD FRIED, and DAVID W. HALTON	684
An Improved Method of Isolating <i>Pneumocystis carinii</i> from Infected Rat Lungs. M. STEPHEN GRADUS and MICHAEL H. IVEY	690
The Effects of <i>Plagiorchis noblei</i> Metacercariae on the Development and Survival of <i>Aedes aegypti</i> Larvae in the Laboratory. S. J. DEMPSTER, R. A. WEBBER, M. E. RAU, and D. J. LEWIS	699
The Effects of Various Light Regimens on the Emergence of Plagiorchis noblei Cercariae from the Molluscan Intermediate Host,	
Stagnicola elodes. R. A. WEBBER, M. E. RAU, and D. J. LEWIS Comparative Studies on the Infectivity of <i>Plasmodium berghei</i> Gametocytes and Ookinetes from Gnotobiotic and Xenobiotic <i>Anoph-</i>	703
eles stephensi. TIMOTHY J. KURTTI and ULRIKE G. MUNDERLOH	706
In Vitro Excystation and Structure of Sarcocystis suicanis Erber, 1977, Sporocysts. DOMINIC A. STROHLEIN and ANNIE K. PRESTWOOD	711
Enhancement of Lycophospholipase Activity with Trichipalla eniralia Antigen, Fuldance for Call Company in Apply 101	
Enhancement of Lysophospholipase Activity with <i>Trichinella spiralis</i> Antigen: Evidence for Cell Cooperation. KEMI ADEWUSI and ARTHUR J. GOVEN	716

GENETICS Cytogenetics of Dictyocaulus armfieldi (Cobbod. 1884) Railliet and Henry, 1907. CRISTINA CUTILLAS, DIEGO C. GUEVARA, ADELA VALERO, and JOSÉ GONZALEZ CASTRO

728

The Karyotype of Plasmodium falciparum Determined by Ultrastructural Serial Sectioning and 3D Reconstruction. G. PRENSIER and CH. SLOMIANNY

731

Use of Parasite Antigen Detection to Monitor the Success of Drug Therapy in Dirofilaria immitis-infected Dogs. GARY J. WEIL. LYNDIA S. BLAIR, DEBRA VISLOCKY EWANCIW, and PAUL F. MALATESTA The Fecundity of Schistosoma mansoni in Chronic Nonhuman Primate Infections and after Transplantation into Naive

RAYMOND T. DAMIAN, CLARENCE A. RAWLINGS, and STEPHEN C. BOSSHARDT

737 741

TAXONOMIC/SYSTEMATICS

Graffilla pugetensis N. Sp. (Order Neorhabdocoela: Graffillidae), a Parasite in the Pericardial Cavity of the Bent-nose Clam, Macoma nasuta (Conrad, 1837). STEWART C. SCHELL Eulimdana rauschorum N. Sp., a Filarioid Nematode (Lemdaninae) from Larus dominicanus in Antarctica, with Comments on

748

Evolution and Biogeography. ERIC P. HOBERG Caryospora uptoni N. Sp. (Apicomplexa: Eimeriidae) from Red-tailed Hawks (Buteo jamaicensis borealis). DAVID S. LINDSAY

762

and BYRON L. BLAGBURN Fallisia Parasites (Haemosporidia: Plasmodiidae) from the Flying Lizard, Draco maculatus (Agamidae) in Thailand. SAM R. TELFORD, JR.

766

RESEARCH NOTES

Effects of Sugars on the Anthelmintic Activity of Kalafungin. EVAN L. ROSENFELD and HAROLD E. LAUBACH Restriction Endonuclease Analysis of Repetitive Sequences in the Trichinella Genome: Three Strain-specific Patterns. G. R. KLASSEN, J. P. THIESSEN, and T. A. DICK

772

770

Survival and Viability of Dirofilaria immitis Microfilariae in Defined and Undefined Culture Media. D. ABRAHAM, S. LAURIA, M. MIKA-GRIEVE, J. B. LOK, and R. B. GRIEVE Paragonimus mexicanus (Trematoda) in Costa Rica in Two New Intermediate Hosts: Ptvchophallus richmondi and Ptvchophallus

777

tumimanus (Crustacea: Decapoda). EDUARDO MONGE and RODRIGO BRENES Factors in Developmental Delay of Paragonimus kellicotti Miracidia. PETER J. WEINA Enzyme-linked Immunosorbent Assay to Detect Antibody Response against Eimeria bovis and Eimeria zurnii in Calves. HELIEH

779

SAATARA OZ, BERT E. STROMBERG, and WILLIAM J. BEMRICK Antigens of In Vitro-produced First-generation Merozoites of Eimeria bovis (Apicomplexa). DAVID W. REDUKER and C. A.

780 782

SPEER Resistance of Helisoma trivolvis from the Dominican Republic to Infection by the Trematode Schistosoma mansoni. SUZANNE G. AYVAZIAN and JOHN C. MALLETT

785

Prevalence and Intensity of Helminth Infections in Southwest Puerto Rico. CARLOS A. RIVERA-MARRERO Studies of the Life Cycle of Pterygodermatites nycticebi (Monnig, 1920) Quentin, 1969. MAY Y. YUE and HELEN E. JORDAN Concentration of 125Globulins in Intestinal Tissues of Immunized and Non-immunized Chickens Infected with Eimeria acervulina. M.

787 788

E. McKENZIE, P. L. LONG, and W. H. BURKE Treatment of Trypanosome-infected Mice with Exogenous Interferon, Interferon Inducers, or Antibody to Interferon. ANTONIE L. W. DeGEE, JOHN M. MANSFIELD, and GERALD SONNENFELD

791 792

Parasites of White Sturgeon, Acipenser transmontanus, from the Fraser River, British Columbia. L. MARGOLIS and T. E. McDONALD Infection Dynamics of Cryptosporidium parvum (Apicomplexa: Cryptosporidae) in Neonatal Mice (Mus musculus). JAMES A.

794

ERNÉST, BYRON L. BLAGBURN, DAVID S. LINDSAY, and WILLIAM L. CURRENT Thiabendazole Uptake. Metabolism and Excretion in Thiabendazole Resistant and Susceptible Trichostrongylus colubrifor-

796 798

NICHOLAS C. SANGSTER and ROGER K. PRICHARD Trichinella from Rats in Central Italy. EDOARDO POZIO

800

Complement and 5-HT Increase Phosphatidylchloline Incorporation into the Outer Bilavers of Schistosoma mansoni. BRUCE W. YOUNG and RON B. PODESTA

802

Helminths of Collared Lizards (Crotaphytus collaris) from the Pedro Armendariz Lava Field, New Mexico. GARY S. PFAFFEN-BERGER, TROY L. BEST, and DERIK DE BRUIN

803 807

Chromosomes of Heterobilharzia americana (Digenea: Schistosomatidae) from Texas. ROBERT B. SHORT and ABRAHAM I. GROSSMAN Alkaline Phosphatase and Phosphodiesterase Activities of the Brush border Membrane of Four Strains of the Tapeworm, Hymenolepis

PETER W. PAPPAS and DAVID A. LEIBY

809

Parasitism of Larval Ixodes Ticks by Chigger Mites and Fed Female Ornithodoros Ticks by Ornithodoros Males. OLIVER, JR., STURGIS McKEEVER, and J. MATHEWS POUND	811
ANNOUNCEMENT	
Editorial Policy Reminder	710
IN MEMORIAM	
Dr. Mary C. Dunn	710
DECEMBER 1986, NUMBER 6	
INVITED REVIEW	
Large-scale Laboratory Maintenance of Schistosoma mansoni, with Observations on Three Schistosome/Snail Host Combinations FRED A. LEWIS, MARGARET A. STIREWALT, CECILIA P. SOUZA, and GIOVANNI GAZZINELLI	813
DRUG ACTION	
Stage-dependent Inhibition of Chloroquine on Plasmodium falciparum In Vitro YA ZHANG, KOFI S. O. ASANTE, and ALBRECHT JUNG	830
ECOLOGY	
Seasonal Occurrence of Metacercariae of the Trematode Cotylurus cornutus (Szidat) in Three Species of Lake-dwelling Leeches S. M. SPELLING and J. O. YOUNG	837
Continued Functioning of the Feeding Apparatus During Moulting of <i>Boophilus microplus</i> as an Adaptation of One-host Ticks K. JORGENSEN and DAVID H. KEMP	846
EXPERIMENTAL	
Stage- and Time-dependent Effects of Crisis Form Factor on <i>Plasmodium falciparum In Vitro</i> B. JENSEN JOSEPH M. CARLIN and JAMES	852
Effects of Cholinergic Drugs on Longitudinal Muscle Contractions of Fasciola hepatica SUZANNE C. SUKHDEO, N. C. SANGSTER,	
and D. F. METTRICK Isolation of a Neurotoxin from the Salivary Glands of Female <i>Rhipicephalus evertsi evertsi</i> GERRIT J. VILJOEN, JACOBUS D. BEZUIDENHOUT, PETER T. OBEREM, NICOLAAS M. J. VERMEULEN, LEON VISSER, RAINER GOTHE, and ALBERT W. H. NEUTZ	858
NEITZ Hemocyte Cell Surface Changes in <i>Aedes aegypti</i> in Response to Microfilariae of <i>Dirofilaria immitis</i> A. J. NAPPI and BRUCE	865
M. CHRISTENSEN In Vitro Excystation of Sarcocystis capracanis, Sarcocystis cruzi and Sarcocystis tenella (Apicomplexa) D. W. REDUKER, C. A. SPEER, and J. P. DUBEY	875 880
Effects of Environmental Calcium on Fucundity and Cercarial Production of <i>Biomphalaria glabrata</i> (Say) Infected with <i>Schistosoma mansoni</i> Sambon ERIC M. MISHKIN and EILEEN H. JOKINEN	885
Cysteinyl Proteinases of Schistosoma mansoni Eggs: Purification and Partial Characterization CHIN K. SUNG and MARC H.	
DRESDEN Proteins and Antigens of Merozoites and Sporozoites of Eimeria bovis (Apicomplexa) DAVID W. REDUKER and C. A. SPEER	891
Developmental Changes in <i>Hymenolepis citelli</i> and <i>Hymenolepis diminuta</i> During Patency ROBERT W. MEAD, NICK ZAPPAS, JOHN THOMFORD, and MARTHA A. KRUMP	901
Expression of Lectin-binding Surface Glycoproteins During the Development of Schistosoma mansoni Schistosomala EUGENE	908
G. HAYUNGA and MARY P. SUMNER Conservation of Diagnostic Antigen Epitopes Among Biologically Divserse Isolates of <i>Trichinella spiralis</i> H. R. GAMBLE and K.	913
D. MURRELL HELMINTH SURVEYS	921
A Survey in Louisiana of Intestinal Helminths of Ponies with Little Exposure to Anthelmintics BETTY J. TORBERT, THOMAS R.	
KLEI, J. RALPH LICHTENFELS, and MELANIE R. CHAPMAN	926
IMMUNOLOGY	
Immunocytolocalization of Two Protection-inducing Antigens of <i>Trichinella spiralis</i> During Its Enteral Phase in Immune and Non-immune Mice VIRGINIA CAPÓ, DAVID SILBERSTEIN, and DICKSON D. DESPOMMIER	931
Elicitation of the Reproduction-inhibiting Antibody Ablastin by Serum Exoantigens of <i>Trypanosoma lewisi</i> PHILIP A. D'ALESAN-DRO	939
LIFE CYCLE AND DEVELOPMENT	
Development of Metacyclic Forms of <i>Trypanosoma brucei</i> sspp. in Cultures Containing Explants of <i>Phormia regina</i> Meigen ISABEL CUNNINGHAM and RONALD KAMINGKY	044

975

Eimerian Life Cycles: The Patency of <i>Eimeria vermiformis</i> , but not <i>Eimeria pragensis</i> , is Subject to Host (<i>Mus musculus</i>) Influence M. ELAINE ROSE and PATRICIA HESKETH	949
BOOK REVIEWS	
Synopsis of Invertebrate Pathology Exclusive of Insects, by Albert K. Sparks. THOMAS C. CHENG	864
Ecology and Genetics of Host-Parasite Interactions, edited by D. Rollinson and R. M. Anderson. DONALD HEYNEMAN	968
CIH Keys to the Nematode Parasites of Vertebrates, edited by Roy C. Anderson, Alain G. Chabaud, and Sheila Willmott. GERALD D. SCHMIDT	969
RESEARCH NOTES	
Kuna nomen novum for Cuna Williams and Williams, 1985, Preoccupied by Cuna Hedley, 1902 ERNEST H. WILLIAMS and LUCY BUNKLEY WILLIAMS	879
Further Study on the Potential Vectors of <i>Dirofilaria</i> in Macon County, Alabama W. E. JOHNSON, JR. and LOUISE HARRELL	955
A Method for Freeing Murine Plasmodia of Contaminating Lactate Dehydrogenase Elevating Virus LYDIA M. PARKE, CAROLE A. LONG, and WILLIAM P. WEIDANZ	956
Acquired Resistance in Mallard Ducks (<i>Anas platyrhynchos</i>) to Infection with <i>Sphaeridiotrema globulus</i> (Trematoda) JANE E. HUFFMAN and DOUGLAS E. ROSCOE	958
Establishment of Monoclonal Antibodies that Discriminate the Antigen Distribution Specifically Found in <i>Anisakis</i> Larvae (Type I) SHUJI TAKAHASHI, NORIYUKI SATO, and HAJIME ISHIKURA	960
Adenylate Cyclase Activity is Absent in Inactive and Motile Sperm in the Nematode Parasite, Ascaris suum S. SEPSENWOL, M. NGUYEN, and T. BRAUN	962
Collection of Fertile Ascaris suum Eggs E. L. JESKA, J. P. CARUSO, and M. J. DONAHUE	964
Genetic Recombination of Markers for Precocious Development, Arprinocid Resistance, and Isoenzymes of Glucose Phosphate Isomerase in <i>Eimeria acervulina</i> CHRISTINA A. SUTTON, M. W. SHIRLEY, and V. McDONALD	965
Indexes	
Author Index, Volume 72	972

Subject Index, Volume 72



THE JOURNAL OF

VOLUME 72 NUMBER 1 FEBRUARY 1986

PARASITOLOGY

Founded by Henry Baldwin Ward

JOURNAL OF THE
AMERICAN SOCIETY OF PARASITOLOGISTS

EDITOR

DAVID F. METTRICK

ASSOCIATE EDITOR

Sherwin S. Desser

CONSULTANTS

William C. Campbell Carmen F. Fioravanti Walter M. Kemp Austin J. MacInnis John S. Mackiewicz Leo Margolis Mary Hanson Pritchard

EDITORIAL BOARD

Mary Beverley-Burton Gilbert A. Castro Raymond T. Damian Terry A. Dick Frank J. Etges Jacob K. Frenkel John C. Holmes Raymond E. Kuhn Jiri Lom Diane J. McLaren Kenneth D. Murrell **Brent B. Nickol** James H. Oliver, Jr. Robin M. Overstreet Larry S. Roberts Gerhard A. Schad Leonard W. Scheibel Clarence A. Speer Jane A. Starling Vassilios J. Theodorides Jeffrey F. Williams Kenneth A. Wright



